

Claims

1. Fatty acid composition comprising at least 80% by weight of omega-3-fatty acids, whereof (all-Z)-5,8,11,14,17-eicosapentaenoic acid (EPA) C 20:5 and (all-Z)-4,7,10,-13,16,19-docosaenoic acid (DHA) C 22:6 are present in relative amounts of from 1:2 to 2:1 and constitute at least 75% by weight of the total fatty acids.
2. Composition according to claim 1, wherein other long chain fatty acids present are (all-Z C 21:5)-6,9,12,15,-18-heneicosapentaenoic acid, and/or (all-Z C 22:5)-7,10,13,16,19-eicosahexaenoic acid and/or (all-Z C 18:4)-6,9,12,15-octadecatetraenoic acid. A
3. Composition according to claim 1 or claim 2, wherein the total concentration of long chain omega-3 fatty acids is at least 90% by weight, whereof EPA and DHA constitute at least 85% by weight of the total fatty acids and are present in relative amounts of EPA:DHA from 1:1 to 2:1, especially about 3:2 and the other long chain omega-3 C 20, C 21 and C 22 acids constitute at least 4.5% by weight.
4. Composition according to claim 1, wherein the total concentration of long chain omega-3 fatty acids is at least 95% by weight, where EPA and DHA constitute at least 90% by weight of the total fatty acids and the other long chain C 20, C 21 and C 22 acids constitute at least 4.5% by weight.
5. Composition according to claim 1 or claim 2 wherein the total concentration of long chain omega-3 fatty acids is at least 85% by weight, where EPA and DHA constitute at least 80% by weight and the other long chain C 20,

C 21 and C 22 acids constitute at least 4.5% by weight.

6. Composition according to claim 4 or 5 wherein EPA and DHA are present in relative amounts of from 1:1 to 2:1.
7. Composition according to claim 1 wherein the fatty acids are present in the form of pharmaceutically acceptable salts.
8. Composition according to claim 1 wherein the fatty acids are present in the form of derivatives.
9. Composition according to claim 8 wherein the derivative is an ester, especially an alkyl ester.
10. Composition according to claim 8 wherein the fatty acids are present in the form of ethyl esters.
11. Composition according to any of the above claims for the treatment or prophylaxis of multiple risk factors for cardiovascular diseases.
12. Method for the production of a fatty acid composition according to any of the claims 1-10, wherein main raw material is subjected to the following steps in optional sequence: transesterification, concentration via urea fractionation or the like, molecular distillation and/or supercritical fluid extraction or chromatography, whereby a main fraction consisting essentially of esters of the omega-3 C 20:5 and C 22:6 acids is isolated giving a total amount of long chain omega-3 fatty acid esters of at least 80% by weight, the urea fractionation and the molecular distillation being carried out under gentle conditions to avoid oxidation and isomerisation of the omega-3 acids.

13. Use of marine oil concentrate containing at least 80% long chain omega-3 fatty acids or salts or derivatives thereof, where (all-Z)-5,8,11,14,17-eicosapentaenoic acid (EPA) C 20:5 and (all-Z)-4,7,10,13,16,19-docosahexaenoic acid (DHA) C 22:6 are present in relative amounts of from 1:2 to 2:1 and constitute at least 75% by weight of the total long chain fatty acids, for the manufacture of a pharmaceutical preparation for the treatment or prophylaxis of multiple risk factors for cardiovascular diseases.
14. Method for the treatment or prophylaxis of multiple risk factors for cardiovascular diseases comprising administering a composition according to the claims 1-10 eventually in admixture with a pharmaceutically acceptable carrier.
15. A process for the manufacture of a pharmaceutical composition for the treatment or prophylaxis of multiple risk factors for cardiovascular diseases, comprising incorporating with a pharmaceutically acceptable carrier or diluent a marine oil concentrate containing at least 80% by weight of long chain omega-3 fatty acids or salts or derivatives thereof, wherein (all-Z)-5,8,11,14,17-eicosapentaenoic acid (EPA) C 20:5 and (all-Z)-4,7,10,13,16,19-docosahexaenoic acid (DHA) C22:6 are present in relative amounts of from 1:2 to 2:1 and constitute at least 75% by weight of the total fatty acids.